

REMARKS

The Non-Final Office Action mailed September 24, 2009, considered and rejected claims 1-21 and 27. Claims 1, 2, 9, 11, 20, and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatano et al., U.S. Publ. No. 2005/0226467 (filed Mar. 5, 2004) (hereinafter Hatano), in view of Thieme et al., U.S. Publ. 2006/0056662 (filed Aug. 20, 2003) (hereinafter Thieme), further in view of Biswas U.S. Patent No. 7,120,280 (filed Sep. 27, 2002) (hereinafter Biswas). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatano in view of Thieme and further in view of Siegel et al., U.S. Publ. No. 2006/0034492 (filed Oct. 30, 2002) (hereinafter Siegel). Claims 4-8 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatano in view of Thieme and further in view of Biswas. Claims 12-19 and 21-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Siegel in view of Biswas.¹

By this response, claims 1, 2, and 12 are amended and claim 27 is cancelled such that claims 1-21 remain pending.² Claims 1, 11, and 12 are independent claims which remain at issue. Support for the amendments may be found, *inter alia*, within Specification ¶¶ 0060-0063.³

Independent claims 1 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Hatano, in view of Thieme, and in view of Biswas. The Applicants respectfully disagree and traverse the rejections. The Applicants hereby reiterate and reassert the traversals as discussed in the response previously filed on June 19, 2009. Further, the Applicants submit that the response to the Applicant's arguments⁴ fail to provide the details and discussion necessary to satisfy the basic requirements of a *prima facie* case of obviousness under 35 U.S.C. § 103.⁵

¹ Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

² The amendments and remarks presented herein are consistent with the information presented by telephone by patent attorney Thomas Bonacci (reg. no. 63,368).

³ Please note that the paragraph numbers are taken from the published application, U.S. Pat. Pub. No. 2005/0227217 (Oct. 13, 2005). It should also be noted that the present invention and claims as recited take support from the entire Specification. As such, no particular part of the Specification should be considered separately from the entirety of the Specification.

⁴ Office Comm. pp. 8-9

⁵ See Response filed June 19, 2009; *c.f.* Office Comm. pp. 8-9.

The traversals of the rejections notwithstanding, the Applicants have amended independent claim 1 (which is incorporated into independent claim 11).⁶ The Applicants submit that the cited references fail to teach or suggest all the limitations of the claims as now presented.

In particular, the cited references fail to teach or suggest preparing a stored template for runtime by: loading a stored template, computing an intensity sum of the stored template, iteratively rotating the stored template in predefined increments through a full 360 degree rotation, and computing moments of pixel intensities from the rotated stored template image. The cited references also fail to teach or suggest detecting a physical property of the patterned object when the patterned object is placed adjacent to an object side of an interactive display surface.

The cited references also fail to teach or suggest creating a template of the patterned object at a known orientation, the template comprising a quadrilateral template bounding region having a side aligned with one of the two orthogonal axes and a set of template data values associated with the quadrilateral template bounding region, each template data value representing a magnitude of the physical property at a different one of a plurality of surface coordinate locations within a bounding area encompassing the patterned object. The cited references also fail to teach or suggest computing a sum of the set of template data values.

The cited references also fail to teach or suggest acquiring input data values from the interactive display surface, each of the input data values corresponding to a different one of the plurality of surface coordinate locations of the interactive display surface, each input data value representing a magnitude of the physical property detected at a different one of said plurality of surface coordinate locations. The cited references also fail to teach or suggest calculating a difference score between the template data values and the input data values encompassed by the quadrilateral template bounding region. The cited references also fail to teach or suggest when the difference score is within a match threshold, determining that the patterned object is on or adjacent to the interactive display surface.

Because of at least the distinctions noted, inter alia, the Applicants submit that rejections of claims 1 and 11 under 35 U.S.C. § 103(a) as being unpatentable in view of Hatano, in view of

⁶ The amendments are presented to point out particular embodiments of the invention and should not be considered as the applicant conceding as to any asserted rejection or the teaching or suggestion of any prior art. The Applicants reserve the right to pursue any subject matter, through appeal continuation or otherwise, at such a time as may be considered appropriate or desirable.

Thieme, and in view of Biswas would be improper and should be withdrawn. Accordingly, the Applicants respectfully request favorable reconsideration of independent claims 1 and 11 as presented (as well as the respective dependent claims).

Independent claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Siegel and in view of Biswas. The Applicants respectfully disagree and traverse the rejections. The Applicants reiterate and reassert the discussion and traversals as detailed in the response previously filed June 19, 2009.

The traversals of the rejections notwithstanding, the Applicants have amended independent claim 12.⁷ The Applicants submit that the cited references fail to teach or suggest all the limitations of the claims as now presented.

In particular, the cited references fail to teach or suggest preparing a stored template for runtime by: loading a stored template, computing an intensity sum of the stored template, iteratively rotating the stored template in predefined increments through a full 360 degree rotation, and computing moments of pixel intensities from the rotated stored template image. The cited references also fail to teach or suggest detecting with the light sensor an intensity of the infrared light reflected back from the patterned object.

The cited references also fail to teach or suggest creating a template of the patterned object at a known orientation, the template comprising a quadrilateral template bounding region having a side aligned with one of the two orthogonal axes and a set of template data values associated with the quadrilateral template bounding region, each template data value representing an intensity of reflected infrared light at a different location within a bounding area encompassing the patterned object. The cited references also fail to teach or suggest computing a sum of the set of template data values.

The cited references also fail to teach or suggest acquiring input data values from the interactive display surface with the light sensor, each of the input data values corresponding to the intensity of infrared light reflected from a different one of the plurality of surface coordinate locations of the interactive display surface. The cited references also fail to teach or suggest calculating a difference score between the template data values and the input data values

⁷ The amendments are presented to point out particular embodiments of the invention and should not be considered as the applicant conceding as to any asserted rejection or the teaching or suggestion of any prior art. The Applicants reserve the right to pursue any subject matter, through appeal continuation or otherwise, at such a time as may be considered appropriate or desirable.

encompassed by the quadrilateral template bounding region. The cited references also fail to teach or suggest when the difference score is within a match threshold, determining that the patterned object is adjacent to the interactive surface.

Because of at least the distinctions noted, inter alia, the Applicants submit that rejections of claim 12 under 35 U.S.C. § 103(a) as being unpatentable in view of Siegel and in view of Biswas would be improper and should be withdrawn. Accordingly, the Applicants respectfully request favorable reconsideration of independent claim 12 as presented (as well as the respective dependent claims).

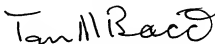
In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 23rd day of December, 2009.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rick D. Nydegger".

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